

## Abstract

This invention relates to a light emitting diode (LED) and a LED lamp consisted of LEDs. The LED comprises at least one LED chip. The LED is mounted on a high heat conductivity base and is connected to an applied power supply through a circuit board. The LED chip also has a transparent medium layer on it. The base top surface acts as a light reflective surface, or a light reflective surface is provided around the base, the LED comprises a screw extended downwards from the base bottom or a screw hole in the base bottom to connect the LED to a heat sink mechanically. The LED is electrically connected to a driving circuit through its outgoing wires. The driving circuit is in turn electrically connected to an electrical connector through its housing. A LED lamp can be fabricated after the LED is enclosed in a transparent bulb housing. The LED has high efficiency, high power and long lifetime and can be used to fabricate LED traffic lamps, LED plane light sources, etc.